

**ARIZONA GAME AND FISH DEPARTMENT
HABITAT PARTNERSHIP PROGRAM
HABITAT ENHANCEMENT AND WILDLIFE MANAGEMENT PROPOSAL**

PROJECT INFORMATION

Project Title: East Clear Creek Meadow Enhancement –Conifer thinning

Project No.

Region/GMU: Region II, GMU 5A

HPC: Forage Resource Study Group

Project Type: Thinning by chainsaw work crew

Project Description: This project will thin 298 acres of mixed conifer. Approximately 97 acres of identified High Elevation Riparian meadows that have been encroached upon by conifers would be rehabilitated through thinning, allowing for greater forage biodiversity and production, and restoration of the riparian system. Approximately 36 acres of small openings along these meadow systems would be created through thinning, allowing for safe foraging for all wildlife, especially turkeys, various small game, and various non-game wildlife. In addition, 165 acres of thinnings above the General Springs meadow system to increase understory biodiversity, restore hydrologic and riparian function, and reduce large fuels. All of these targets have been identified by the Coconino National Forest in their landscape scale East Clear Creek Watershed Health Improvement Plan.

Wildlife Species to Benefit: Elk (50%), Mule Deer (25%), Turkey (20%), various small game and non-game (5%)

Possible Funding Partners: USFS

Implementation Schedule:

Beginning: July 1, 2007

Completed: June 30, 2009

PROJECT FUNDING

SBG Funds Requested: \$ 20,000

Cost Share Funds: \$ 20,575

Total Project Costs: \$ 40,575

PARTICIPANT INFORMATION

Applicant: Garrett Fabian

(please print)

Telephone: 928-474-2053

Address: Arizona Game and Fish Department

3500 S. Lake Mary Rd

Flagstaff, AZ 86001

AGFD Contact and Phone No.

(If applicant is not AGFD personnel)

Coordinated with: Coconino National Forest (USFS)

Date: 02/15/07

Applicant's signature: Garrett Fabian

Date: 03/01/07

SEND COMPLETED APPLICATIONS TO:
Game Branch
2221 W. Greenway Rd.
Phoenix, AZ 85023
mdisney@azgfd.gov

NEED STATEMENT/PROBLEM ANALYSIS:

The overall purpose of this project is multi-faceted and has multiple benefits to wildlife, considering the array of interconnected conditions within riparian meadow systems and the impacts of subsequent actions. Historically, high elevation meadow systems in the East Clear Creek watershed of GMU 5A were moist, riparian systems that acted as sponges to hold water creating an oasis of biodiversity and forage production. As a result, these areas were very attractive to both wildlife and livestock. In the 1990's, overgrazing of these meadows by ungulates resulted in a conversion from native grasses to non-native grasses such as Kentucky Bluegrass. This conversion does not withstand high-flow events or retain water, so soil erosion through down cutting is a significant threat to these meadows. In addition, conifers have been allowed to encroach into these meadows further amplifying the threat to the meadow system by reducing flow duration. In 1995, a survey conducted by the Coconino National Forest revealed the majority of meadows were non-functioning riparian systems due to lack of proper vegetation (biodiversity), soil compaction, and down cutting.

Since 2000, several measures have been taken to improve the health of these riparian meadow systems. Some of these measures include:

- Elimination of livestock grazing on 12,000 acres of identified southern pastures with high elevation meadows
- Alteration of grazing plan to reduce overall livestock numbers
- Alteration of grazing plan to rest-rotation strategy so northern pastures are rested every other year
- Construction of livestock/elk exclosures in identified meadows to help promote riparian meadow recovery
- Temporary reduction of the elk population to help facilitate riparian meadow recovery

While these efforts have helped improve the riparian system function, recovery could be enhanced further by addressing the issue of conifer encroachment. Conifer encroachment on these meadows has had many negative implications to wildlife including:

- Loss of biodiversity (forage quality)
- Loss of forage productions (reduction in carrying capacity)
- Loss of small openings along meadows (foraging safety for smaller wildlife)
- Loss of flow duration (reduction in water table)
- Loss of perennial water sources

Historically, high elevation riparian meadows have been an integral habitat component for all wildlife in GMU 5A. It is a key habitat component for summering Elk, Mule Deer, Turkeys, Black Bear, small game, and various non-game, including some Threatened and Endangered species. Loss of this habitat has been instrumental in the loss of carrying capacity for this GMU. This project would help restore riparian meadow function, leading to an increased carrying capacity for all wildlife in the future. This would possibly allow for an increasing elk herd, which would meet current AZGFD Commission and Regional Elk Op. plan direction.



Encroachment of Conifers along High Elevation Riparian Meadow.

PROJECT OBJECTIVES:

There are multiple objectives of this proposal. First, is to increase understory and meadow biodiversity, which will improve forage quality. Second, is to increase forage production. Third, is the creation of small opening adjacent to these meadows, creating foraging sanctuaries for smaller wildlife that do not utilize the larger meadows where they are more vulnerable. Fourth, is the cumulative effect of the first three, leading to the restoration of high elevation riparian meadow systems, which will increase water retention and availability for wildlife. Elk, Mule Deer, Turkeys, Black Bear, small game, various non-game, including some Threatened and Endangered species all utilize this habitat and will benefit from this project.

In addition, the AZGFD is pursuing a translocation project of Dusky (Blue) Grouse to this mixed conifer habitat in both GMU 4A & 5A to provide a new small game recreational opportunity. This project is currently in the planning stages and we hope for implementation in the summer of 2007. Funding of the East Clear Creek Meadow Enhancement HPC project would create additional small openings that would greatly benefit the Dusky Grouse project.

This project would be a partnership between the Arizona Game and Fish Department and the Coconino National Forest (Mogollon Ranger District of the USFS). The Coconino National Forest has already

identified and prioritized this project in their East Clear Creek Watershed Health Plan. In 2006, 233 of the 330 high elevation meadow acres were treated for conifer encroachment by the Coconino National Forest at their own cost. In addition, the Coconino National Forest has already dedicated \$20,575 in 2007 for the planning and completion of the meadow restoration and the thinning treatment of 165 acres along the General Springs head water meadow. It should be noted that while this project is prioritized as a watershed health improvement project by the Coconino National Forest, many of these meadows are in pastures closed to livestock grazing, so the sole beneficiary is wildlife. Also, the small foraging openings proposed in this project proposal are the direct result of consultation with the AZGFD.

PROJECT STRATEGIES:

This project will accomplish the above mentioned objectives by Bobcat and hand cutting conifers less than 9.0 inches in diameter at breast height (dbh) with chainsaws along identified high elevation riparian meadows, which is a key summer habitat type for wildlife. The remains of the conifers will be lopped and scattered to create micro-climates to promote native forage growth. The second thinning along the General Springs Headwater meadow, that is intended to increase understory biodiversity and production, will be accomplished by Bobcat and hand cutting conifers up to 9" dbh with chainsaws. The slash created would be hand piled and burned. The project will be completed by Coconino National Forest personnel and/or Forest Service contractors, trained in these silvicultural prescriptions.



Loss of plant diversity due to meadow encroachment.

PROJECT LOCATION:

This project is located in the southern portion of GMU 5A. It is in the East Clear Creek Watershed in the Coconino National Forest. Location for meadow treatment breakdown is as follows:

MEADOW	ACRES
Kinder Draw	13
McClintock Springs	9
Houston Draw	11
Houston Draw	17
Bear Canyon	11
General Springs	7
Merritt Draw	29
Subtotal Acres	97
Buck Springs*	11
Bill McClintock*	4
East Bear*	2
West Leonard Canyon*	6
Barbershop*	3
Holder Cabin*	8
Middle Leonard Canyon*	2
Subtotal Acres	36
Total Acres	133

* meadows thinned in 2006. Acres listed are about 20% of total acres previously treated.

The 165 acres of additional proposed thinning is along the General Springs headwater within the Aqueduct Protected Activity Center. Thinning would have to occur between September 1 and February 28 (Mexican spotted owl timing restriction to mitigate impacts to breeding owls). Please refer to the included map that identifies all the treatment sites.

LAND OWNERSHIP AT PROJECT SITE (Please state specifically if PRIVATE PROPERTY and provide landowner's name):

USDA, Coconino National Forest

IF PRIVATE PROPERTY, IS THERE A STEWARDSHIP AGREEMENT BETWEEN THE LANDOWNER AND THE DEPARTMENT?

HABITAT DESCRIPTION:

This project occurs in high elevation riparian meadows surrounded by Ponderosa Pine and Mixed Conifers. Plant species in the area include Douglas and White Fir, Ponderosa Pine, Aspen, Squirrel tail, AZ Fescue, Mountain Mulley, Kentucky Bluegrass and various sedges. Average elevation is 7500 to 7000 feet.

ITEMIZED USE OF FUNDS:

Treatment	Assumptions	Unit	Unit Cost	# Units	Total Cost
Meadow Thinning and Creation of Openings – 14 sites	Forest Service Force Account	Acres	\$150	133	\$19,950
Thinning of Aqueduct PAC – 1 site	Forest Service Contract	Acres	\$125	165	\$20,625

Project Header

Name: NFWV MR East Clear Creek Watershed Restoration Meadow Thinning Phase 2

Description: Remove conifers up to 9" dbh in meadows in East Clear Creek Watershed Project Area. Lop and scatter down trees to create microclimates

National Goal: 5 - Improve watershed condition

Objective: 5.1.0 - Assess and restore high priority watersheds and maintain riparian habitat in these watersheds

Leader: Dick Fleishman

Fiscal Year: 2007

Unit Priority:

Unit: COCONINO NF

Approved: No

Status:

Stewardship Contract?: No

Project UDF 1:

Project UDF 2:

Project UDF 3:

Project UDF 4:

Comments:

Created by Dick Fleishman on 2006-07-06

Last Modified by Carol Holland on 2007-02-23

Personnel

Personnel	Rate/day	NFWV	Total Days	Total
DINSMORE, CHARLES	\$162.07	\$1,070	7	\$1,070
FLEISHMAN, RICHARD	\$326.85	\$2,288	7	\$2,288
VICE, GILBERTSON, P	\$210.00	\$1,470	7	\$1,470
WADE, WILLIAM	\$162.07	\$3,144	20	\$3,144
WHITE, RICHARD	\$200.25	\$3,787	20	\$3,787
Total		\$11,759	61	\$11,759

Fleet

Fleet	FOR Rate/Month	Months	Use Rate	Use Units	NFWV	Total
3797 - 1/2 T PU 4X4	\$156	0	\$0.21/MILE	1,000	\$210	\$210
4106 - 3 PASS PU	\$156	0	\$0.21/MILE	1,000	\$210	\$210
4645 - 3/4 T PU	\$343	1	\$0.23/MILE	1,000	\$573	\$573
4950 - 3/4 T PU 4X4	\$288	1	\$0.26/MILE	1,000	\$548	\$548
5296 - 4X4 1/2 T EXT CAB	\$156	0	\$0.21/MILE	1,000	\$210	\$210
Total					\$1,751	\$1,751

Other Resources

Other Resources	Units Needed	NFWV	Total
10% FOR	1 EACH	\$100	\$100
5% COLA	1 EACH	\$1,000	\$1,000
Bobcat parts and Fuel	1 EACH	\$2,500	\$2,500
Digital camera	1 EACH	\$500	\$500
Misc Supplies	1 EACH	\$1,390	\$1,390
chainsaw parts and gas	1 EACH	\$1,000	\$1,000
Total		\$6,490	\$6,490

Project Totals

Total Personnel Costs:	\$11,759
Total Fleet Cost:	\$1,751
Total Other Cost:	\$6,490
Total Project Cost:	\$20,000

Activities

NFWV	
Job Code: NFWV04	
Activity Name	Allocated Cost
NFWV-WC	\$20,000
BLI Total	\$20,000
Activity Total	\$20,000
Balance	\$0

Accomplishments

NFWV		
NFWV-WC		
	Planned	Actual
s&w-rsrc-imp	1000.0	0.0

The budget for the 165 acre thinning along the General Springs Aqueduct is anticipated to be nearly identical to the above related chart for the meadow restoration. Both budgets were estimated by the Coconino National Forest, because they will be doing the work or contracting the services.

LIST COOPERATORS AND DESCRIBE POTENTIAL PARTICIPATION:

This project will be a cooperative effort between the Coconino National Forest and the Arizona Game and Fish Department if approved:

- ❖ The Coconino National Forest has already completed 233 of the 330 identified acres of meadow enhancement, which is not included in the cost share analysis
- ❖ The Coconino National Forest has already completed NEPA analysis on the suggested project
- ❖ The Coconino National Forest is providing \$20,575 in planning, materials, equipment, and labor
- ❖ The Coconino National Forest will oversee all budget, contracts, and monitoring efforts
- ❖ Arizona Game and Fish Department will provide \$20,000 in matching funds from the HPC process to the Coconino National Forest for materials, equipment, and labor

PROJECT MONITORING:

The Coconino National Forest will be responsible for monitoring efforts. Project leader, Dick Fleishman, will digitally photograph meadows prior and post treatment, document size and digitally photograph the created small foraging sanctuaries, and digitally photograph the General Springs prescription prior and post treatment. Short term project monitoring will be evaluated by multiple site visits the year following project completion. Long-term project success will be documented through digital photography through successive years.

PROJECT MAINTENANCE:

None.

PROJECT COMPLETION REPORT TO BE FILED BY:

The Coconino National Forest will submit a summary of activities to AZGFD Wildlife Manager Garrett Fabian, who will file the Project Completion Report.

TREE SHEARING (AGRA-AXE, PUSH) PROJECTS (see attached worksheet):

N/A. Work will be done in house by the Coconino National Forest or their contractors.